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observations, communicated to me by Messrs. Mohn and Fearnley.

	1864.	1865.	1866.	1867.	1868.	1869.
v	6′·87	6′·26	5′·64	5′·25	6′·58	8′·39
v'	6·00	5·72	5·70	5·69	6·65	7·82

It is hardly necessary to remark that the constants of the formulæ may, by means of the whole series of the Christiania Observations, easily be altered so as to obtain a yet better agreement. I prefer, however, for the present not to make this change.

Zurich, March 28, 1870.

Observations of Lunar Eclipse, Jan. 17, 1870.

By J. Tebbutt, jun.

The lunar eclipse of the 17th instant was remarkably well seen here. The Moon was overspread with very thin filmy cloud till about 11^{h} 43^{m}, but the diminution of her brilliancy from that cause was very slight. She remained unclouded during the rest of the phenomenon. No decided defalcation of light was noticed on the eastern limb till 10^{h} 41^{m}, but at 10^{h} 52^{m} the effects of the penumbra were very marked. The following are the local mean times of the different phases as near as they could be observed, it being a most difficult matter to fix the precise instants of the contacts owing to the ill-defined character of the shadow:—

	d	h	m	s
First contact with the shadow	17	11	1	19
Beginning of the total phase	..	12	0	29
End of the total phase	..	13	38	53
Last contact with the shadow	..	14	38	58

At 11^{h} 29^{m} the shadow assumed a light copper tint, except at its periphery, where it was of a very dark green. The copper tint, as seen in the telescope, appeared to extend even to the filmy cloud which lay along the Moon's eastern limb. At 11^{h} 43^{m}, when the Moon shone unclouded, the details on the obscured portion of the lunar surface began to be perceptible in the telescope. These became gradually more distinct, and it was soon observed that the dark body of the Moon was surrounded by numerous telescopic stars, and that many occultations would occur during the total phase. Several of these phenomena were observed with tolerable accuracy; some of the stars, however, were too faint for accurate observation. The following occultations were recorded:—

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Star.	Mag.	Phase.	Mean Time.			Remarks.
			h	m	s	
a	7	Disappearance	11	59	24·7	Disappearance sudden.
b	8½	,,	12	49·4		(Approx.)
c	8	,,	13	2	19·3	Disappearances near upper limb: a little uncertain.
d	8	,,	13	5	0·2	
e	8	Reappearance	13	6	18·7	
a	7	,,	13	25	4·2	(Approx.)
f	7	Disappearance	13	36	24·2	Uncertain to a second, owing to increasing brightness of limb.

The noted time of the reappearance of the star *a*, owing to a temporary removal of the eye from the telescope, was probably two or three seconds late. The Moon's disk was of a copper hue throughout the total phase, and continued distinctly visible both to the naked eye and in the telescope. The southern limb was remarkably bright at the middle of the eclipse. The meridian transit of the first limb was pretty well observed, but the second limb was too faint. The copper and dark green tints were again observed after the total phase, that portion of the obscured surface next to the centre of the shadow being copper-tinted, and the outline of the shadow being very dark green. The telescopic observations during the eclipse were all made with my refractor of 3¼ inches aperture, and 48 inches focal length, furnished with a magnifying power of about 30.

Windsor, New South Wales, Jan. 26, 1870.

A few further Notes on the Floor of Plato.
By W. R. Birt, Esq.

In my communication on the floor of *Plato*, which was read at the Meeting of the Society in November last, I solicited attention to a feature presented by the spots, and which I ventured to term "degree of visibility." The paper had reference to twenty-five spots, the degree of visibility of sixteen being given. The entire number of observations to Sept. 27, 1869, was 238. Since that date the observations have been continued, and greater attention has been given to the subject, and as twelve months' observations are now completed, including a luni-solar year, the following results may not be uninteresting.

The number of spots which have been seen on the floor of *Plato* up to the present time is thirty-five, eight of which have been detected since Sept. 27, 1869. The number of observations since that date amounts to 531, being more than double the number (240) during the first six lunations of the year 1869, April to 1870 March inclusive. In the following table the "degree of visibility" of each spot is given for the first six lunations, the last six lunations, the increase or decrease of visibility of

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